# NOTES AND BRIEF ARTICLES

[Unsigned notes are by the editor]

Dr. Murrill visited the State Museum at Albany early in February to study types of certain species of dark-spored gill-fungi in collections made by the late Dr. Peck.

---

Prof. H. M. Fitzpatrick, of Cornell University, spent several days at the Garden late in January examining specimens of an interesting group of Pyrenomycetes, which he is monographing. He also visited the mycological herbaria at Washington, Philadelphia, and Boston.

---

Mr. Harold E. Parks, whose articles on underground fungi have been read with so much interest, has been appointed technical assistant and collector in the Department of Botany at the University of California. His address is no longer San Jose, but Berkeley.

---

Supplementary lists of species of smuts and rusts occurring in Indiana, prepared by H. S. Jackson, were published in the *Proceedings of the Indiana Academy of Sciences* for 1920.

---

Cryptogamic diseases of cacao and of cocoanut, over 20 in number, are discussed at length by R. Averna-Saccá in the Agricultural Bulletin of San Paulo for 1920. Forty-one figures accompany the 140 pages of text.

---

An illustrated article by C. E. Chidsey in the *Scientific American Monthly* for November, 1920, attempts to explain the formation of knots and boles on forest trees. This article might be interesting in connection with some of the recent experiments on plant cankers.

In a paper on two new *Sclerotinia* diseases found in Washington, by B. F. Dana in *Phytopathology* for May, 1921, *Sclerotinia gregaria* and *S. demissa* are described as new. The former occurs on the leaves and fruits of *Amelanchier Cusickii* and the latter on the leaves, twigs, and fruits of *Prunus demissa.*

---

Kauffman's paper on the species of *Inocybe* in Peck's collections, published in the Report of the State Botanist for 1919, contains many interesting notes and comments which are especially valuable because the author has recently completed a study of this difficult genus for *North American Flora,* which is expected to appear during the present year.

---

Another paper on new or little-known hosts for wood-destroying fungi, by Arthur S. Rhoads, appeared in *Phytopathology* for August, 1921. Quite an array of interesting hosts are noted for many of our common species; and additions both to hosts and descriptive characters are made in the case of *Polyporus cutifractus* Murrill and *P. carbonarius* Murrill.

---

A circular leaf-spot of geranium plants, caused by *Cercospora Brunkii,* is discussed by Garman in Bulletin 239 of the Maryland Experiment Station. Methods of watering, rather than mites and other insects, seem to spread the disease, which may be controlled by good ventilation, precautions against excessive humidity, and the use of Bordeaux mixture.

---

For two years there has been an exhibit of the oriental diseases of the Para rubber-tree, *Hevea brasiliensis,* at the Imperial College of Science and Technology in London. The chief fungous diseases represented are those caused by *Fomes lignosus, Fomes pseudoferreus, Ustulina zonata, Phytophthora Faberi, Corticium salmonicolor, Cyphella Heveae,* and *Botryodiplodia Theobromae.* The specimens were shipped from Ceylon and Malaya under the direction of J. B. Farmer.

The Tuckahoe, or *Pachyma cocos,* was illustrated and described at some length in the *Missouri Botanical Garden Bulletin* for June, 1921. This fungous sclerotium was not used for food to any great extent, if at all, by the Indians, because it has little nutritive value; the word tuckahoe was simply a general term applied to any edible root. Various medicinal properties have been ascribed to *Pachyma cocos,* but there seems to be no real foundation for the traditional belief in its curative virtues.

---

The following note regarding Krieger's remarks on *Amanita pantherina,* recently published in MYCOLOGIA, has been sent me by Neuhoff. According to him, *A. pantherina* DC. is undoubtedly poisonous, and is so considered by practically all mycologists everywhere; but in Germany it has been confused by Michael with the non-poisonous species, *A. spissa* Fries, and this error has been widely disseminated. Several authors are quoted by Neuhoff to support his opinion, among them Ricken, Romell, and Kauffman.

---

I have been endeavoring for some time to locate the original collector of *Ganoderma oregonense,* published in 1908 in *North American Flora.* The following extract from a letter received from Prof. Kirkwood seems to supply the missing information: "I think that the collection of fungi to which you refer was one that I made in the summer of 1905, along the Tillamook coast. I remember having packed a box which I sent to you along about August of that year, or maybe in September. I kept no record of them, but think there was a *Ganoderma* in the lot."

---

Philippine polypores were discussed by Graff in the *Torrey Bulletin* for last November. He uses *Polyporus Mariannus* Pers. for *P. anebus* Berk.; *P. rhodophoeus* Lév. for *Fomes semilaccatus* Berk.; *Ganoderma leptopum* (Pers.) Graff for *G. umbraculum* Pat.; *Fomes lineatus* (Pers.) Graff for *P. fastuosus* Lév.; and *Fomes roseo-albus* (Jungh.) Bres. for *P. caliginosus* Berk. The following species of Murrill are reduced to synonymy: *Ganoderma Curranii* equals *G. leptopum; Pyropolyporus Williamsii* equals

*Fomes lamaensis;* and *Coriolopsis Copelandii* equals *Fomes roseo-albus.* The author reports a very extensive and rich fungous flora, with much still to be learned.

---

In an article by Schmitz and Zeller on the effect of creosote on wood-destroying fungi, published in the *Journal of Industrial and Engineering Chemistry,* it is stated that the results of experiments indicate no toxic effects of any single distilled fraction or combination of fractions of the coal-tar creosote below a concentration of 1 per cent, calculated on the weight of air-dried sawdust. That is, there was no visible cessation of growth of either *Lenzites saepiaria* or *Polyporus lucidus* below a 1 per cent concentration. In a majority of cases the toxic point, which is defined as the minimum percentage of the creosote which will completely inhibit the growth of the organisms, lies between 2 and 4 per cent.

---

A splendid illustrated paper on "The Collybias of North Carolina," by Coker and Beardslee, appeared in the *Journal of the Elisha Mitchell Scientific Society* for December, 1921. Twenty-two species are recognized for the state, one of them, *Collybia lilacina,* being described as new. This species seems fairly abundant about Chapel Hill, and Dr. Coker has illustrated it both in color and in black and white. Our American *C. butyracea* is shown to be for the most part simply a large form of *C. dryophila;* and *C. subdryophila,* described by Atkinson from specimens collected in North Carolina by Coker, is considered a synonym of *C. dryophila.* The authors make *C. strictipes* Peck equivalent to *C. nummularia* Fries and *Mycena palustris* (Peck) Sacc. a synonym of *C. clusilis.* They also discuss the relationship of *C. tuberosa* and *C. cirrata;* and include *C. conigena* Fries, *C. hariolorum* Fries, *C. semitalis* Fries, and *C. distorta* A. & S. as good American species.

---

Dr. B. M. Duggar writes me that my report of his paper at the Toronto meeting, published on page 51 of the January number of *Mycologia,* is not in accordance with what he meant to convey. "I

did make a statement," he says, "to this effect: 'The term agency rather than organism is employed because it is hoped to avoid any possible prejudice to the direction in which such research may lead. It is distinctly felt that any assumption tacitly ascribing such diseases, because infectious, to organisms of the known or usual types may serve in the end to restrict rather than broaden the investigation.' Moreover, because I was able to determine more or less definitely the dimensions of the infectious agency I did not state as quoted that 'therefore,' it 'can not be a germ or similar organism.' Finally, I do not term it a 'living fluid contagion,' but did merely quote from Beijerinck his well-known expression, 'contagium vivum fluidum.'" Fortunately, Dr. Duggar's paper will shortly be published in full and those interested in the subject will at once forget my inaccurate report of it.

---

Enzyme action in *P. volvatus* and *F. igniarius* is discussed by Schmitz in the *Journal of General Physiology* for July, 1921. From the standpoint of parasitism, *Polyporus volvatus* is one of the most interesting of the wood-destroying fungi. Although no inoculation experiments have been made, numerous observations tend to confirm the opinion of the writer that it is truly parasitic. Throughout Washington, Oregon, and Idaho it is not at all unusual to find fruiting bodies appearing in great numbers over practically the entire surface of the trunk of Douglas fir, white fir, and western hemlock. This condition may be observed on trees still having a green, healthy foliage as well as on trees which to all appearances have been killed by the fungus.

Cultures of *Polyporus volvatus* and *Fomes igniarius* were obtained from the young sporophores by the tissue method. In *D. volvatus* the presence of the following enzymes was demonstrated: esterase, maltase, lactase, sucrase, raffinase, diastase, inulase, cellulase, hemicellulase, glucosidase, rennet, and catalase. In *F. igniarius* the presence of the following enzymes was demonstrated: esterase, maltase, lactase, sucrase, raffinase, diastase, inulase, cellulase, hemicellulase, glucosidase, urease, rennet, and catalase.

## A NEW LICHEN FROM AN UNUSUAL SUBSTRATUM

Dung of various animals is examined frequently by mycologists for fungi not found elsewhere, and algae and mosses are seen on these substrata not infrequently. Among the fungi the lichenist sometimes sees *Cladoniae* and *Bacidia inundata,* but I had not until recently known of a lichen species found on no other substratum than dung.

For many years I have made it a practice to examine any dung that was colored green by algae or by moss protonemata, in the hope that I might find some new or rare lichen. Finally, on the tenth of March, 1920, near Conway, Rockcastle County, in central Kentucky, I found what appeared to be the minute fruits of some lichen which had parasitized *Protococcus* growing over some cow dung. These minute fruits were *Botrydium*-like in appearance, and examination showed that they belonged to a lichen of the genus *Thelocarpon.*

Growing with the *Thelocarpon* was another ascomycete with even more minute fruits, often giving the appearance of having parasitized the algae, forming a true lichen thallus. The *Thelocarpon,* on the other hand, showed no superficial thallus and no relationship with the algae other than that the fruits were rendered yellow-green by a layer of the algae, which spread over their surfaces. This condition made it appear that the lichen thallus was wholly within the substratum at the time when the fruits were mature, though algae were in all probability parasitized and a superficial thallus produced in early development, only to disappear later. Several species of *Thelocarpon* have been described as having no thalli, all of them probably having, in their early stages of development, superficial thalli of one of the types found among crustose lichens. In all of these instances it would be worth while to trace out the relationship between the lichen and the algae, which occur always in the thalloid veils of species of *Thelocarpon,* and usually in crustose thalli as well.

The description below was prepared after a careful examination of the descriptions of the 30 known species of the genus.

**Thelocarpon fimicola** Fink sp. nov.

Superficial thallus absent, or not readily distinguishable from the layer of algae growing over the surface of the substratum; apothecia minute and spheroidal, 0.05 to 0.15 mm. in diameter, pale within and surrounded by a thin thalloid veil; asci at first cylindrical, but becoming variously ventricose as the spores mature, most commonly distended toward the center and tapering toward both ends; paraphyses inconspicuous and disappearing as the fruit matures; spores one-celled, minute, hyaline, spheroidal to oblong, 2 to 4 by 1.5 to 2 mic., very numerous in each ascus.

Growing with algae on cow dung, in a damp wood, near Conway, Rockcastle County, Kentucky. The algae which were growing on the substratum gave it a coloration which could be detected from a standing position, but there is little evidence of the presence of algae in the dried specimens.

BRUCE FINK

---

ANOTHER GREEN-SPORED GENUS OF GILL-FUNGI

While working over specimens of *Pilosace* for the article on dark-spored agarics, published earlier in this number, I discovered some interesting things which did not properly belong under that title, so I have set them apart here.

*Chlorophyllum* Mass., based on the plant known as *Lepiota Morgani,* was published in 1898 and discussed in N. Am. Flora **10**: 64. 1914. It differs from *Lepiota* in having green spores.

*Chloroneuron* Murrill, based on the tropical American species, *Neurophyllum viride* Pat., was published in Mycologia **3**: 25. 1911 and discussed in N. Am. Flora **9**: 172. 1910. The spores are green and the lamellae fold-like, as in *Chanterel.*

In the new genus here described the spores are green and the lamellae adnate or adnexed, as in *Hypholoma* or *Psathyra. Schulzeria* Bres. is a "*Lepiota* without an annulus," having free gills and hyaline spores. Massee's *S. Eyrei,* however, has green spores and an appendiculate veil, with free gills.

**Chlorosperma** gen. nov.

Hymenophore putrescent, solitary to subcespitose; pileus fleshy,

glabrous or finely floccose; lamellae adnate or adnexed, often seceding at an early stage so as to appear free; spores smooth, green; stipe central, cartilaginous; veil, if present, not forming an annulus.

The type of this genus is *Agaricus olivaesporus* Ellis & Ev., described below.

**Chlorosperma olivaespora** (Ellis & Ev.) comb. nov.

*Agaricus eximius* Peck, Ann. Rep. N. Y. State Mus. **24**: 70. 1872; not *A. eximius* C. P. Laest. Lapp. Torn. 1860.

*Agaricus olivaesporus* Ellis & Ev. Jour. Myc. **5**: 27. 1889.

*Hypholoma vinosum* Kauffm. Agar. Mich. 1: 261. 1918.

*Pilosace Peckii* House, Bull. N. Y. State Mus. 205–206: 39. 1919.

Pileus thin, fleshy, fragile, convex or campanulate to expanded, subumbonate, solitary to subcespitose, 1–2 cm. broad; surface smooth or obscurely rugulose, pulverulent-floccose, becoming nearly glabrous, dark-brick-colored when moist, purplish-umber when dry, at length dark-sooty-brown; margin appendiculate at first with pale fragments of the veil; context thin, dingy-white, fragile, with very sweet odor and taste; lamellae adnate, seceding, crowded, rather broad, rounded behind, nearly plane to ventricose, entire on the edges, purplish-violet or purplish-brown to chestnut-brown, becoming lighter when dry and more or less tinged with brick-red; spores ellipsoid, smooth, olive-brown when fresh, umber-brown on drying, olivaceous under the microscope, about 5 x 3 $\mu$; cystidia none; stipe slender, equal, colored and clothed like the pileus, cartilaginous, fistulose, rather brittle, exuding a slight purplish juice when broken, 2–4 cm. long, 1–2 mm. thick.

TYPE LOCALITY: Newfield, New Jersey.

HABITAT: On much-decayed wood, stumps, or logs in mixed woods, or among moss in swamps.

DISTRIBUTION: Rare in New York, New Jersey, Pennsylvania, Ohio, and Michigan.

ILLUSTRATION: Hard, Mushr. *f. 259*.

EXSICCATI: Ellis & Ev. N. Am. Fungi *2009*.

Peck's type specimens were collected on old stumps in woods at Greig, New York, in August, 1870. The sheet containing these has others from Old Forge, Indian Lake, and Felt House, with a drawing in color. Peck describes the gills as reddish, and later

applies this term to the spores, which was probably an error on his part. Because of this some have claimed that the species should be transferred to *Pluteus*. Hard says that he found the plant on three different occasions in Haynes' Hollow growing on old stumps and decayed logs. His figure is from a photograph of some of his plants taken by Kellerman and his description from Peck, no reference being made to the color of the spores.

Ellis found his plants among moss in swamps at Newfield, New Jersey, in sufficient quantity for distribution. An original packet in his herbarium is marked "July 30, 1887. Spores ellipsoid, 3.5–4 x 2 $\mu$, olive-brown." In his description, he says the green shade is very distinct. He agrees with Peck in calling the lamellae "free."

Kauffman's specimens, some of which I saw at Albany, came from Bay View, New Richmond, Michigan, on much-decayed wood or logs in mixed woods. According to him the lamellae are adnate at first, then seceding; and the spores purplish-brown in mass, pale under the microscope. I find them to be identical with those from specimens collected by Peck and Ellis. Mrs. Delafield got a cluster of three hymenophores at Buck Hill Falls, Pennsylvania, last July and made a colored sketch of it. She found the "lamellae free or slightly adnate, separating readily from the stipe; odor very sweet, taste sweet."

The differences in the color of the spores recorded above are doubtless due to observations made on fresh and dried spores in mass by reflected light and under a microscope by transmitted light varying in intensity.

W. A. MURRILL